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**Descriptions of some new CERAMBYCIDÆ with notes.**

BY GEORGE H. HORN, M. D.

A few new species of Cerambycidæ have accumulated since the publication of the posthumous memoir of Dr. LeConte, descriptions of which will be found in the following pages. In order that some of the genera might be better understood new studies have been prepared, and these with the tables already published give very nearly all our species in synoptic form.

The discovery of some hitherto unobserved characters in *Monilema* suggests the hope that something may yet be done to render the descriptions of the Mexican species intelligible.

**HYPEXILIS** n. g.

This name is proposed for a small species allied to *Gracilia* and *Exilis* with the following special characters:

Antennæ ♂ twice as long as the body, joints 3-11 gradually increasing in length. Eyes moderately prominent, coarsely granulated, deeply emarginate. Maxillary palpi much longer than the labial, the terminal joint broad, securiform; last joint of labial narrowly oval, truncate at tip. Femora clavate; first joint of hind tarsi longer than the next two.

In all other characters the species resembles *Gracilia*. The structure of the maxillary palpi relates it more closely to *Exilis*, but the structure of the antennæ (the third joint being shorter, not longer than the fourth) and the broader head are sufficient to separate it.

**H. pallida** n. sp.—Slender, pale testaceous. Head across the eyes wider than the thorax, surface coarsely punctured. Thorax elongate, one-third longer than wide, sides at apical third parallel, then gradually wider to two-thirds, arcuately narrowing to base which is slightly wider than the apex, disc slightly flattened posteriorly, surface rather coarsely punctured and rugulose. Elytra wider than the thorax, humeri distinct, sides straight, slightly converging, apices separately rounded, suture at tip slightly dehiscent, disc rather flat, a vague elevation from the humeri to near the tip, surface evenly and closely punctate, more finely than the thorax. Thorax beneath coarsely but sparsely punctate, abdomen shining, very sparsely punctate. Length .22 inch; 5.5 mm.

More slender than *Gracilia pygmæa*, more coarsely punctured and paler.

One specimen ♂, given me by Mr. Charles Wilt, collected in Texas.

**GRACILIA** Serv.

**G. obliquata** n. sp.—Form slender, pale brownish testaceous, subopaque. Head behind the eyes moderately coarsely punctate. Thorax oval, a little longer than wide, slightly narrower at base than apex, sides moderately arcuate, disc feebly convex, a vague median sulcus and one on each side oblique, slightly in front of middle, surface moderately coarsely punctate. Elytra slightly wider than the thorax, sides parallel, apices separately rounded, disc subdepressed, a vague oblique depression on each side from the humeri to the suture, surface finely pubescent, rather sparsely punctate, the intervals very finely granular, apices nearly smooth. Thorax beneath coarsely not closely punctate. Abdomen moderately shining, very sparsely punctate. Femora very strongly clavate. Length .20 inch; 5 mm.

A species somewhat more robust than *pygmaea*, with more strongly clavate femora and oblique impressions at the sides of thorax and base of elytra.

One specimen given me by Mr. A. S. Fuller, collected in Texas.

**METALEPTUS** Bates. -

**M. Batesi** n. sp.—Black, opaque, sparsely clothed with fine, short, gray pubescence with longer erect hairs sparsely intermixed, more abundant on the thorax, elytra at base and entire lateral margin red. Head and thorax coarsely and roughly punctured, the lateral spine small but acute. Elytra coarsely and densely punctured, the apices conjointly rounded. Body beneath coarsely punctured, more densely pubescent. Length .40-.52 inch; 10-13 mm.

*Male*.—Antennæ slender, about one and a half times the length of the body, 12-jointed.

*Female*.—Antennæ 11-jointed, stouter, not longer than the body, the last four joints sub serrate, eleventh joint obliquely emarginate at tip.

This species so reproduces the form and color of *M. angulatus* that the two might be placed together, except that the punctuation of the upper surface is here much coarser and rougher, and the tips of the elytra are sinuously truncate in *angulatus*.

The genus *Metaleptus* is rather briefly described by Mr. Bates (Trans. Ent. Soc. Lond. 1872, p. 192), and the antennæ are said to be 11-jointed, the terminal joint appendiculate. In the species before me there is a distinct articulation between the last two joints.

I have dedicated this species to my friend, H. W. Bates, as an evidence of my appreciation of his recent work in the Biologia Centrali-Americana.

Occurs in Arizona. Morrison.

*M. angulatus* Chev.—A specimen of this species was sent me by Dr. Dohrn, said to have been collected in southern California. I do not know of any other specimens having been taken even near the borders of our territory.

*Metaleptus* is allied to *Purpuricenus*, and differs from it in the absence of antennal tubercles in the male and the pubescent surface. From *Tragidion* it differs in the absence of sulci or costæ on the elytra, and by the more prominent genæ.

### OXOPLUS Lec.

**O. jocosus** n. sp.—Beneath black, body above (except head) red, elytra with the basal margin narrowly and a broad common sutural band extending three-fourths to base, black, surface sparsely pubescent. Head coarsely, roughly punctured. Thorax densely, cribrately punctured, the apical and basal margins narrowly bordered with black. Elytra slightly narrower posteriorly, the apex obtusely truncate, the sutural angle distinct but not prominent, surface very coarsely and not closely punctured near the base, the punctures gradually finer toward the apex and much denser. Body beneath (except prothorax) black, rather sparsely punctured and with moderately long fulvous pubescence. Length .48-.60 inch; 12-15 mm.

*Male*.—Antennæ one and a fourth times the length of body.

*Female*.—Antennæ three-fourths the length of body.

The only variation in color is in one specimen in which the thorax has five black spots, two adjoining the apical and three the basal margin. The general style of coloration resembles that of *Crossidius discoideus*, except that the discal space of the elytra does not extend narrowly along the suture to the base.

Colorado and Arizona.

Four species of this genus are now known to me from our fauna they may be separated in the following manner:

Thorax black, the tips of the tubercles red.

Elytra very densely punctate, color black, the basal margin and the side three-fourths to apex red. Body beneath at middle and entire abdomen red. Apices of elytra ♂ sinuately truncate, sutural angle rounded.....**marginatus**.

Thorax red, the apical and basal margins sometimes narrowly black.

Abdomen red.

Elytra black, broadly margined with red at base which extends down the side three-fourths to apex; surface densely rather finely punctate; apices sinuously truncate, sutural angle obtuse. Body beneath red, sides of meso- and metasternum browner.....**cruentus**.

Elytra in great part red, a broad black band extending from the apex nearly two-thirds to base: surface rather coarsely not densely punctured: apices truncate, the sutural angle slightly prolonged. Body beneath black, abdomen red.....**corallinus**.

Abdomen and entire body beneath black.

Elytra colored as in *corallinus* with a very narrow basal black band: surface coarsely punctured at base more finely and closely toward apex; apices separately rounded, the sutural angle distinct but not prolonged.

**jocosus**.

- O. marginatus** Lec. Proc. Acad. 1862, p. 42; .86-.95 inch, 22-24 mm.—Lower California.  
**O. cruentus** Lec. ibid.; .75-.85 inch, 19-21 mm.—Lower California.  
**O. corallinus** Lec. ibid.; .70-.80 inch, 18-20 mm.—Utah and New Mexico.  
**O. jocosus** Horn supra; .48-.60 inch, 12-15 mm.—Colorado and Arizona.

In the first two species I have observed faint traces of costæ on the disc of the elytra near the base.

The genus *Oxoplus* as stated by LeConte is closely allied to *Tylosis*, and differs in having the sides of the thorax obtusely spinous and the disc without callosities. In both genera the antennæ are 12-jointed in the males, the terminal joint being longer than the eleventh in *Tylosis* and shorter in *Oxoplus*. I am satisfied that in *Oxoplus* there is a true articulation between the last two joints and that the eleventh is not merely appendiculate. The female antennæ are 11-jointed.

The genus *Oxoplus* as described by Lacordaire may possibly not be congeneric with that intended by LeConte, the type of ornamentation being so very unlike as to suggest the existence of structural differences on comparison.

#### **TYLOSIS** Lec.

In the *Biologia* (vol. v, p. 81) Mr. Bates speaks of *T. sellata* as a distinct species. The series in my cabinet will not only demonstrate that *maculata* and *sellata* are inseparable, but that the color variation is still greater. In two specimens before me the two median and posterior black spots have become confluent into a large discoidal spot covering fully two-thirds of the entire area of the elytra; from this every variety occurs until nothing remains on the elytra except the two subapical spots.

#### **CROSSIDIUS** Lec.

**C. humeralis** Lec. Journ. Acad. 2, iv, p. 28. "Sordide luteus, pubescens thorace rotundato, longius pubescente, rude punctato, callis parvis duobus notato, elytris dense punctatis, vix obsolete bicostatis, linea brevi humerali nigra ornatis; subtus obscurus, densissime pubescens."

"Dull testaceous, densely pubescent; punctures of elytra dense finer behind, a short humeral vitta black, which in one specimen has a continuation near the tip (indicating that it may be entire in some individuals)."—*New Species* 1873, p. 197.

I reproduce the two descriptions given by Dr. LeConte as important points in the one are omitted in the other. In the first description the two callosities of thorax are noted, in the second the possibility of the humeral stripe becoming an entire vitta is hinted at.

The two specimens in the cabinet of Dr. LeConte have, as far as I know, remained the only ones to which we could refer.

Very recently some specimens were sent me from Texas, which from their appearance I had supposed to be new, and within a few days others were sent me by Mr. Merkel for examination which fill the series completely in the color variation.

One specimen before me has the elytra dirty yellow without marks, and excepting the thorax looks not unlike the males of *intermedius*; a second specimen has the short humeral black vitta. The form with the short apical continuation of the humeral vitta is in LeConte's cabinet. There is in Mr. Merkel's collection a specimen with the suture narrowly piceous and the humeral line continuous in a narrow vitta nearly to the tip. Three specimens in my cabinet show the gradual widening of the sutural stripe and the discal vitta until the elytra become almost entirely black with merely the lateral margin and an abbreviated discal vitta yellow.

The thorax has the two callosities always distinct, but as the elytra become darker there are five callosities indicated by the black spots placed as in *Tylosis* with the addition of two smaller antero-lateral spots.

In the *Biologia* (v, p. 82) Mr. Bates describes a closely allied species, *trivittatus*, if indeed it is not identical. The faint elytral costæ, of which Mr. Bates makes especial mention, are plainly shown in several of our species, and very distinct in *testaceus*.

### STENOSPHEMUS Hald.

In a recent study of the specimens which have accumulated in my cabinet six very distinct species were found to be present. With the exception of two which were well known, the others were supposed to be the equivalents of those enumerated by Mr. Bates in the *Biologia*. This, however, seems not to be the case, and I am quite sure that the species to which the name *cribripennis* had been attached is not that species.

The difference in the sculpture of the prosternum of the two sexes does not seem to have been observed. In its highest development the character consists of a depressed space extending from one side of the prosternum to the other which is densely coarsely or even cribrately punctured, in the male. This space does not extend to the apical margin, and in several species is divided in two by a smooth space extending from the apical margin to the tip of the prosternum. In the females the prosternum is either sparsely punctate or almost smooth. In *S. notatus*, however, there does not seem to be any difference between the two sexes.

The following table will enable our species to be separated:

Thorax wider than long, not narrowed at apex.

Thorax reddish yellow with a discal black spot.....**notatus**.

Thorax as long or longer than wide, narrower in front.

Punctures of elytra separated by three longitudinal smooth intervals..**lugens**.

Punctures of elytra dispersed.

Thorax red, elytra black.

Femora red.

Thorax oval, not longer than wide, punctures numerous. Elytra very obliquely truncate, the outer angle spiniform.....**novatus**.

Thorax oblong, longer than wide, punctures few and inconspicuous. Elytra sinuously truncate, the angles not spiniform..... **lepidus**.

Femora black.

Thorax oval, very nearly smooth. Elytra less obliquely truncate, the angles sometimes spiniform.....**dolosus**.

Body and legs pale brownish testaceous.

Thorax coarsely punctured, a median smooth space only. Elytra obliquely truncate, both angles subspinous.....**debilis**.

**S. notatus** Oliv.—Black, shining, thorax and under side of head reddish yellow, the former with a large discal black spot, surface sparsely clothed with short yellowish pubescence. Thorax broader than long, apex and base equal, sides rather strongly arcuate, surface sparsely punctured at the sides. Elytra coarsely, sparsely punctured, the punctures a little finer near the tip; apices separately emarginate, both angles acute, the outer somewhat longer. Length .35-.48 inch; 9-12 mm.

In both sexes the prosternum is very sparsely punctate, in some specimens nearly smooth. The antennæ ♂ are one-fourth longer, and those of the female shorter than the body. The discal spot of the thorax is sometimes wanting.

Widely distributed in the Atlantic region.

**S. lugens** Lec.—Black, shining, head and thorax above and beneath red, surface sparsely pubescent, on the elytra arranged in stripes with the punctures. Thorax oval, a little longer than wide, narrower in front, surface smooth, almost without trace of punctuation. Elytra rather coarsely punctured, the punctures arranged in longitudinal spaces separated by smooth intervals; apices truncate, the inner angle acute, the outer spiniform. Length .48 inch; 12 mm.

In the males the prosternum is smooth at middle, in front of each coxa a more roughly punctured space not sharply limited.

Occurs in Texas.

**S. novatus** n. sp.—Black, moderately shining, thorax and femora red, sparsely clothed with very short gray hair. Head entirely black, coarsely closely punctate. Thorax oval, not longer than wide, narrower in front, sides moderately arcuate, surface coarsely sparsely punctured except at middle of disc. Elytra coarsely and moderately closely punctured, the punctures equal from base to apex; apices very obliquely truncate, both angles spiniform, the outer longer. Metasternum at sides coarsely sparsely punctate, abdomen sparsely punctate at sides. Length .38 inch; 9.5 mm.

In the males the antennæ are nearly twice as long as the body. The prosternum in front of the coxæ, except a smooth band at apex, is coarsely punctured and opaque, and the space so sculptured is depressed.

This is the species which appears in our lists as *cribripennis* Thoms. It is, however, smaller, thorax less elongate and the surface less coarsely punctured.

Resembles the species which I have identified as *rufipes* Bates, from Mexico, but the latter has the thorax more and the elytra less coarsely punctured, and the male has a well limited, oval, coarsely cribrate space on the prosternum in front of each coxa.

Occurs at Cape San Lucas, Lower California.

**S. lepidus** n. sp.—Entire body beneath black, thorax and femora bright red. Head coarsely, closely punctate. Thorax oblong oval, longer than wide, sides feebly arcuate, surface shining with a few punctures of unequal size irregularly disposed near the sides. Elytra moderately coarsely punctured, the punctures a little deeper and closer near the apex, each bearing a short yellowish hair; apices sinuously truncate, the angles dentiform. Body beneath at sides sparsely punctate, abdomen almost smooth. Femora bright red, piceous at knees, tibiæ and tarsi black. Length .38 inch; 9.5 mm.

The two specimens before me are males, one having the under side of thorax red, the other black. In both the antennæ are nearly one and a half times the length of the body. The prosternum beneath is coarsely, cribrately punctured except a very polished space along the apical border and a nearly smooth line at middle.

Two specimens, Arizona.

**S. dolosus** n. sp.—Black, prothorax and often the meso-metasternum red. Head coarsely, densely punctured. Thorax oval, a little longer than wide, sides moderately arcuate, disc shining with a very few indistinct punctures. Elytra moderately, sparsely punctured, each puncture with a short yellowish hair; apices obliquely truncate, the angles slightly spiniform. Body beneath sparsely, abdomen very sparsely punctate. Legs black. Length .27-.42 inch; 7-10.5 mm.

In the male the antennæ are one and a third times the length of the body; the prosternum is densely cribrately punctured except a space along the apical border and from that along the middle to the tip of the prosternal process. The female antennæ are nearly as long as the body, the prosternum rather sparsely punctured over its entire surface.

Occurs in southwestern Texas.

**S. debilis** n. sp.—Entire body and members pale brownish testaceous, very sparsely pubescent. Head coarsely and deeply punctured. Thorax oval, longer than wide, narrower in front, sides feebly arcuate, surface very coarsely but not closely punctate, except a small space at middle. Elytra moderately closely not coarsely punctate, apices truncate, slightly obliquely, the angles sub-spinous. Body beneath very sparsely punctate. Length .30-.36 inch; 7.5-9 mm.



The male antennæ are one and a third times the length of the body. The prosternum is cribrately punctured in a depressed space over its entire surface except a narrow space in front and between the coxæ.

Of this species I have two male specimens taken in different years and both the same color which might be supposed to be an indication of immaturity. The species is, however, distinct from the others by the much more coarsely punctured thorax and the sexual characters of the prosternum.

Two specimens, Utah.

### Bibliography.

**S. notatus** Oliv. (*Callid.*) Ent. iv, 70, p. 61, pl. 7, fig. 89.

*defendendum* Newm. (*Elaph.*) Entomologist p. 6 and 30.

**S. lugens** Lec. Proc. Acad. 1862, p. 41.

**S. novatus** n. sp. (*cribripennis* Check List.)

**S. lepidus** n. sp., **S. dolosus** n. sp., **S. debilis** n. sp., supra.

*S. sobrius* Newm. (*Elaph.*) described erroneously from the United States is abundant at San Luis Potosi, Mex., and should not be included in our lists.

### ACMÆOPS Lec.

**A. viola** Lec. Proc. Acad. 1860, p. 321.

This species is mentioned to note its accidental omission from among the species in the table given by Dr. LeConte (*New Species*, 1873, p. 209).

The form is robust and similar to *tumida*. The color violet-blue, legs and antennæ black, surface clothed with short black erect hair. The elytra are more densely punctate and the thorax rather less so than in *tumida*. In the latter species the pubescence is longer and not stiff, yellowish in color.

*A. tumida* is abundant in Oregon and northern California, while *viola* belongs to the central regions of the latter State.

### MONILEMA Say.

The descriptions of our species of *Monilema* are so widely scattered, and for the most part very incomplete, that it has seemed to me proper to present a new study based on a larger aggregate of material than has been heretofore accessible.

The characters heretofore used in the separation of the species seemed very superficial and variable, and the very distinct appearance of most of the species gave good grounds for suspecting other characters of a more permanent nature.

The first character of moment is in the structure of the scape of the antennæ to which Dr. LeConte (New Species, 1873, p. 229) has already called attention, consisting of a prolongation inwards of the apex in a submucronate manner. With this we find associated a greater elongation of the first joint of the hind tarsus, while it is at the same time more slender.

The under side of the tarsal joints exhibits so much and such striking variation that it is difficult to understand how it has escaped observation. The usual vestiture of the under side of the tarsi is a yellowish spongy pubescence. This is present on the first three joints of the tarsi in the group of species of which *variolare* is the centre.

In the series of species as arranged below from *annulatum* to *forte*, the first joint of the hind tarsus is not spongy pubescent beneath, the middle of the joint being almost smooth the sides with densely placed short black hair. In many of these species the second joint has but a small patch on each side. In *subrugosum* the tip of the first joint of the hind tarsus has a very small spongy space. In *obtusum*, *spoliatum* and *forte*, the spongy pubescence gradually disappears from the joints, so that there is none whatever on *forte*.

In *variolare* and *Ulkei* it will be observed that the mesosternum between the coxæ is deeply grooved, while in the closely allied *crassum* the mesosternum is rather flat. These three species are further remarkable in having the surface clothed with an extremely fine pubescence and the surface is microscopically punctulate. The same pubescence extends on the legs.

The lateral spine of the thorax, which plays an important part in the separation of genera in various parts of the Cerambycidæ, here ceases to have any value whatever, and even within specific limits we may have quite an evident small spine or none whatever.

The annulation of the antennæ with cinereous bands cannot be depended upon as the pubescence is fugitive, and if made use of otherwise than as a purely specific character leads to confusion. The antennæ do not differ in length in the two sexes, but are slightly stouter in the males.

The sexes are distinguished by the form of the last ventral segment—broadly emarginate in the male and oval at tip in the female; the form of the legs—the femora are strongly clavate ♂, comparatively slender ♀; the pygidium is usually concealed in the male, exposed in the female. The females often have a smaller thorax than the males, this is especially observable in *subrugosum* and *armatum*.

In separating species surface sculpture must be cautiously dealt with, especially as there are often marked differences in this respect between the sexes.

I must again acknowledge my indebtedness to my friend Ulke, of Washington, for his kindness in the loan of specimens, more particularly for the types of *forte* and *obtusum*.

The species of *Monilema* are confined to the western and southwestern regions of our country from western Kansas to Colorado, Utah, Texas, New Mexico, Arizona, the extreme southeast of California and the Peninsula of California, the regions in fact in which there are long periods of drought, and in which Cactus is a marked feature of the vegetation. Of their food-plants nothing, I believe, is known.

The number of species known certainly to inhabit our fauna is now twelve, with possibly one more (*variolare*) to be included. In the *Biologia Cent. Am.*, Mr. H. W. Bates enumerates ten species from the regions between our southern boundary and Panama, but it is greatly to be regretted that he has remained content with their mere enumeration as, on the whole, the Mexican species of *Monilema* are about as unsatisfactorily described as any *Cerambycidae* with which I have had to deal.

From the characters given in the preceding papers it is proposed to divide our species in the following manner:

**A.**—Scape of antennæ sub-mucronate inwards at tip. First joint of hind tarsus as long or even longer than the next two and comparatively slender.

Sub-genus **Monilema**.

**B.**—Scape of antennæ simple. First joint of hind tarsus not longer than the next two and broad. .... Sub-genus **Collapteryx**.

Sub-genus **Monilema**.

In addition to the above characters the following may be mentioned: The first and second joints of the hind tarsi are glabrous at middle, the second with a narrow spongy pubescent space each side, the third entirely spongy pubescent. The anterior and middle tarsi have the first three joints spongy pubescent beneath, the pubescence divided by a narrow line.

The two species belonging here are separated in the following manner:

Thorax quadrate or a little wider than long, the sides with a feeble tubercle. Elytra sparsely and regularly punctured at basal half, wrinkled at apex, the sides arcuately deflexed ..... **annulatum** Say.

Thorax cylindrical, usually longer than wide, without trace of spine or tubercle. Elytra not conspicuously punctate, usually smooth but feebly shining, sometimes with deep longitudinal wrinkles, the sides abruptly deflexed and obtusely margined near the base. .... **appressum** Lec.

Sub-genus **Collapteryx**.

The vestiture of the tarsi is variable, and affords the means of dividing the species into smaller groups. No other characters than those given above will apply to all the species.

The name here used has been proposed by Newman (Ent. Mag. v, p. 397) for a Mexican species, and should it be considered advisable to divide *Monilema* into two genera this name should be revived, the division *Omoscyon* proposed by Mr. James Thomson being founded on evanescent characters.

From the varying tarsal and other structures the species may be separated in the following manner :

Scape of antennæ and legs smooth.....2.

Three basal joints of antennæ and legs coarsely punctured.....7.

2.—First joint of hind tarsus without any spongy pubescence beneath.....3.

First joint of hind tarsus spongy pubescent over almost the entire surface.....8.

3.—Second joint of hind tarsus with a small spongy pubescent space each side.....4.

Second joint of hind tarsus without trace of spongy pubescence.....6.

4.—Thoracic spines long and acute, directed strongly upward and backward.

Elytra with slightly depressed disc, the sides abruptly declivous, obtusely margined near the humeri. Thorax with very few punctures.

**gigas** Lec.

Thoracic spines small or tuberculiform, sometimes barely perceptible.....5.

5.—Thorax with numerous coarse and fine punctures intermixed over the entire surface, the coarser punctures more numerous near the base and apex.

**semipunctatum** Lec.

Thorax almost entirely smooth, a few punctures, at most, along the base and apex.

Elytra with extremely few punctures, these placed at the middle of the side and under the humeri.....**laevigatum** Bld.

Elytra with numerous coarse punctures extending two-thirds to apex, the deflexed portion punctured nearly to the apex.....**armatum** Lec.

6.—Anterior tarsi with the first three joints spongy pubescent beneath. Thorax coarsely punctured with a feeble lateral tubercle.....**obtusum** Lec.

Anterior tarsi with the third joint bearing a small spongy pubescent space each side.

Thorax punctured at apex and base, the lateral spine small but acute.

**spoliatum** n. sp.

Tarsi with scarcely a trace of spongy pubescence on any of the joints. Thorax coarsely punctured, the lateral spine moderately long and acute.

**forte** Lec.

7.—Thorax sparsely punctured, without trace of lateral tubercle, elytra coarsely punctured. Hind tarsi with a small spongy pubescent spot at the apex of the first joint, the second and third joints entirely spongy pubescent.

**subrugosum** Bld.

8.—Intercoxal process of mesosternum rather deeply grooved in its entire length.

Elytra variegated with a net-work of very fine pubescence in at least one sex.

Elytra distinctly wider at base than the thorax, the humeri slightly prominent. Thorax with very few punctures and these placed along the base and apex. Pubescence of elytra white..... **Ulkei** n. sp.

Elytra not wider at base than the thorax, the humeri rounded. Thorax with numerous punctures on the disc. Pubescence of elytra fulvous.

**variolare** Thoms.

Intercoxal process of mesosternum nearly flat not grooved. Elytra not pubescent..... **crassum** Lec.

**M. annulatum** Say.—Black, moderately shining. Front smooth. Scape of antennæ smooth, joints 3-6 annulate with white at basal half. Thorax quadrate, slightly narrower in front, wider than long, sides usually slightly arcuate with a feeble tubercle slightly behind the middle, surface nearly smooth, a few punctures along the basal margin only. Elytra elongate oval, about twice as long as wide, narrower at apex than base, sides arcuately declivous, surface moderately coarsely and regularly punctured at basal half, the apex slightly wrinkled, in well preserved specimens a stripe of extremely fine plumbeous pubescence extending from the humeri to the apex. Body beneath smooth and shining, femora smooth. Length .48-.72 inch; 12-18 mm.

The anterior and middle tarsi have the first three joints spongy pubescent beneath divided by a narrow line. The first joint of the hind tarsus is without spongy pubescence, the second and third joints spongy pubescent with a wider median division.

This species exhibits very little noteworthy variation. A small specimen in Mr. Ulke's cabinet has very few punctures at the base of the elytra.

Occurs in Colorado, eastern New Mexico and Northern Texas.

**M. appressum** Lec.—Black, feebly shining. Front with few small punctures. Scape of antennæ nearly smooth, joints 3-6 annulate at base. Thorax subcylindrical, longer than wide, slightly narrower in front, sides not tuberculate, surface nearly smooth, a few inconspicuous punctures along the base. Elytra elongate oval, a little more than twice as long as wide, apex scarcely narrower, sides abruptly declivous, obtusely margined near the base, surface with few inconspicuous punctures at basal third, the surface either smooth, vaguely, or even deeply longitudinally wrinkled. Body beneath smooth, legs smooth. Length .56-1.16 inch; 14-29 mm.

The tarsi beneath are similar to those of *annulatum* but the median division is sometimes indistinct. The second joint of the hind tarsi has a smaller pubescent space.

This species varies especially in the elytra. In some the disc is rather flat and the edge of the declivity distinctly marked, in others nearly as convex as in *annulatum*. The surface may be quite smooth with feeble trace of wrinkles or may be deeply longitudinally wrinkled, with all intermediate forms.

The smoother specimens are from Arizona, the deeply wrinkled from New Mexico.

**M. gigas** Lec.—Black, shining. Front sparsely finely punctate. Scape of antennæ smooth, the fourth joint alone broadly annulate. Thorax as wide as long, slightly narrower in front, the sides with a long acute spine directed upwards and slightly backward, surface with few punctures, more numerous along the basal margin. Elytra oval, somewhat narrower behind, humeri oblique, disc slightly flattened, sides obtusely margined and abruptly declivous, the surface with coarse punctures extending two-thirds to apex. Body beneath smooth, shining, femora smooth. Length 1.20–1.36 inch; 30–34 mm.

The first three joints of the anterior and middle tarsi are spongy pubescent beneath with narrow median line. The first joint of the hind tarsus is not pubescent, the second with a small space on each side spongy pubescent, the third entirely so.

The specimen before me, the type of the description of Dr. LeConte, has the coarse punctures of the elytra rather regularly disposed over the entire surface two-thirds to apex and on the sides to the same extent. Two other specimens have the middle of the disc of the elytra almost entirely free of punctures, these being placed near the side and on the deflexed portion. In both forms the side of the thorax below the spine is coarsely punctured and the median line of the disc slightly impressed posteriorly.

Occurs in Arizona.

**M. semipunctatum** Lec.—Form rather elongate, black, shining. Front punctured with coarse and fine punctures intermixed. Scape of antennæ sparsely punctate, the other joints not annulate. Thorax a little wider than long, sides slightly arcuate with a small subacute spine, the surface punctured over the entire disc with coarse and fine punctures intermixed, the sides below the spine coarsely punctured. Elytra oval, more than twice as long as wide, slightly narrower posteriorly, sides abruptly deflexed, an obtuse margin near the humeri, the surface sparsely punctured, the punctures gradually finer and these wanting on the apical third, the sides with more numerous punctures near the base, then sparser two-thirds to apex. Body beneath sparsely finely punctate, femora punctate. Length .74–1.00 inch; 18.5–25 mm.

The tarsi beneath are as in *gigas*. The only variation observed is that usual in all the species, consisting of a greater or less distinctness of the punctuation. This species and *subrugosum* are the only ones in which the scape and the femora are observed to be punctate, this is however much less distinct here than in that species.

Occurs at Cape San Lucas, Lower California.

**M. lævigatum** Bld.—Moderately elongate, black and very shining. Front sparsely punctate each side. Scape of antennæ smooth, joints 3–6 indistinctly annulate. Thorax slightly wider than long, sides feebly arcuate, a small acute

tubercle behind the middle, disc smooth, a few coarse punctures along the base. Elytra elongate oval, nearly twice as long as wide, sides abruptly deflexed, surface smooth, a few coarse punctures near the side and beneath the humeri. Body beneath smooth, impunctate, femora smooth. Length .84-.88 inch; 21-22 mm.

The tarsal characters are as in *gigas*. In the three specimens before me I observe no noteworthy variation. A specimen loaned me by Mr. Ulke has red thorax and femora, it is merely immature.

Occurs in New Mexico, near Santa Fe.

**M. armatum** Lec.—Moderately elongate, shining. Front sparsely punctate each side. Scape of antennæ smooth, joints 3-6 indistinctly annulate. Thorax a little wider than long, sides slightly arcuate and with an acute, post-median, short spine, surface smooth, a few punctures along the base and under the spine. Elytra elongate oval, nearly twice as long as wide, sides abruptly declivous, either obtusely margined ♂ or not ♀, the surface with coarse punctures sparsely and irregularly placed, extending two-thirds to apex, the deflexed portion more coarsely and closely punctured at base, more sparse posteriorly and reaching nearly to apex. Body beneath and femora smooth. Length .66-1.00 inch; 16.5-25 mm.

The tarsal characters are as in *gigas*. The males have the elytra more abruptly declivous than the female and the punctures of the surface are coarser and more numerous.

Occurs in Colorado and Texas.

**M. obtusum** Lec.—Form moderately elongate, black shining. Front sparsely punctate each side. Scape of antennæ smooth, joints 3-6 annulate with cinereous at base. Thorax slightly longer than wide without trace of lateral tubercle or spine, the surface coarsely not closely punctate, the deflexed sides smoother. Elytra oval, not twice as long as wide, the sides rather abruptly deflexed, surface rather sparsely punctate two-thirds to apex, the punctures not large, but subimbricate near the humeri and at the base of the deflexed portion. Body beneath and femora smooth. Length .75 inch; 19 mm.

Anterior tarsi with the first three joints spongy pubescent beneath; middle tarsi with the first two joints having a small spongy pubescent space each side, the third joint spongy pubescent, the lobes well separated; hind tarsi with a small pubescent space on each side of the third joint alone.

Of this species I have seen the type from Mr. Ulke's cabinet, collected in Utah.

**M. spoliatum** n. sp.—Form moderately elongate, black, shining. Front sparsely punctate each side. Scape of antennæ smooth, joints 3-6 indistinctly annulate. Thorax wider than long, slightly narrower at base than apex, sides slightly arcuate in front of the small, acute lateral spine and nearly straight behind it, disc sparsely indistinctly punctate, a few coarse punctures at apex and base, the deflexed portion coarsely punctured in front. Elytra elongate oval, nearly twice as long as wide, sides abruptly deflexed, surface smooth, a few small

submuricate punctures near the humeri extending obsoletely half way to apex, the deflexed portion more distinctly punctured. Body beneath and femora smooth. Length .92 inch; 23 mm.

Anterior and middle tarsi with the third joint alone bearing a small space of spongy pubescence on each lobe; hind tarsi similar.

This species might be mistaken for *laevigatum* but the punctuation and the tarsal characters will separate it. The thoracic spine is also larger.

One specimen ♀ from Peninsula of California near the northern boundary.

**M. forte** Lec.—Form moderately elongate, black, shining. Front punctate. Scape of antennæ nearly smooth, joints 3–7 annulate at base. Thorax a little wider than long, base slightly narrower than apex, sides in front of the acute lateral spine slightly arcuate, posteriorly nearly straight, surface of disc rather irregular, median line distinct posteriorly, the surface coarsely and deeply punctured at the basal half and more narrowly along the apex, the deflexed sides coarsely punctured. Elytra elongate oval, nearly twice as long as wide, sides abruptly declivous, surface sparsely punctate two-thirds to apex and near the humeri more coarsely submuricately punctate, the deflexed sides numerous punctate near the base. Body beneath and femora smooth. Length 1.20 inch; 30 mm.

The anterior and middle tarsi have an extremely small spot of spongy pubescence on the third joint only; hind tarsi without spongy pubescence.

In this species the thoracic spine is more developed than in any except *gigas*.

One specimen ♂ from the cabinet of Mr. Ulke.

**M. subrugosum** Bld.—Form moderately elongate, black, shining. Front punctate. Antennæ with first four joints rather coarsely punctate, the fourth joint feebly annulate. Thorax as long as wide, sides arcuate, without trace of tubercle or spine, surface sparsely punctate, more coarsely along the base, apex and deflexed portion. Elytra elongate oval, nearly twice as long as wide, sides abruptly deflexed and obtusely margined ♂, more arcuately deflexed ♀, surface with numerous coarse and deep punctures which extend three-fourths to apex, the deflexed portion with more numerous and deeper punctures. Abdomen coarsely punctured at middle, legs rather roughly punctate. Length .78–1.08 inch; 19.5–27 mm.

The first three joints of the anterior and middle tarsi are spongy pubescent over the entire surface; the first joint of the hind tarsus is spongy only near the tip, the second and third over the entire surface.

The vestiture of the tarsi is of a grade intermediate between the first six species and those which are to follow. The general rough sculpture of the surface, the absence of thoracic spine and the tarsal vestiture will distinguish this species.

Peninsula of California, Cape San Lucas.



**M. Ulkei** n. sp.—Form moderately robust, black, feebly shining, thorax and elytra ♂ variegated with a network of fine white pubescence, in the female glabrous. Front sparsely punctate with extremely fine brownish pubescence, the vertex near the border of the eyes with white pubescence. Scape of antennæ smooth, joints 3-4 narrowly annulate at base. Thorax wider than long, narrower at apex, sides with a short but obtuse spine, in front of which the sides are oblique and behind parallel, disc moderately convex, a slight depression above the spine, with few scattered punctures and others more numerous in a transverse line in front of base, surface clothed with extremely fine brown pubescence with a network of white near the sides and base. Elytra oval, narrower posteriorly, the base truncate wider than the base of the thorax, the humeri distinct, sides abruptly declivous, disc feebly convex with numerous coarse and deep punctures not closely placed, extending nearly to the apex and a little finer posteriorly, the sutural region not punctate and broader posteriorly, the deflexed portion of the elytra more coarsely and closely punctured than the disc. Body beneath almost impunctate, clothed with an almost invisible brown pubescence with small patches of white, the bases of the femora and the coxæ conspicuously white. Mesosternum deeply grooved between the coxæ. Femora smooth. Length .76-.86 inch; 19-21.5 mm.

The first three joints of all the tarsi are densely spongy pubescent beneath.

The females have the elytra much less punctured, and in one specimen before me slightly wrinkled, the surface above without pubescence.

Superficially this species resembles *variolare*, from which it differs as follows: the surface is less punctured and the pubescence white, not fulvous, the thoracic spine more distinct; the femora smooth, in *variolare* coarsely punctate; the humeri more prominent and the base of the elytra broader.

Feeling quite confident that this species differs from any that are described with similar ornamentation, I dedicate it to my friend Henry Ulke, whose name I have already had occasion to mention.

Occurs in Dimmit County, Texas; given me by Mr. F. G. Schaupp.

**M. variolare** Thoms.—Form moderately elongate, black, shining. Front sparsely punctate at the sides with dark brown pubescence above, vertex with fulvous pubescence between the eyes. Antennæ not distinctly annulate, the scape and third joint sparsely punctate. Thorax wider than long, obtusely tuberculate at the sides, apex slightly narrower than base, sides arcuate, disc moderately convex sparsely coarsely punctate, more coarsely at the base and deflexed sides, surface clothed with extremely fine brown pubescence with a network of yellowish white or fulvous. Elytra oval, narrower posteriorly, longer in the female, the base not or very little wider than the thorax, humeri very obtuse, sides abruptly deflexed, disc slightly flattened with numerous coarse punctures not closely placed which become finer posteriorly and attain the apex in the ♂, the ♀ smooth at apical third, the deflexed portion more closely and coarsely punctured, surface clothed with extremely fine brown pubescence with an intricate network of fulvous pubescence, often entirely absent in ♀. Body beneath sparsely punctate,

clothed with fine yellowish white pubescence in patches, forming bands on the abdomen. Mesosternum deeply sulcate between the coxæ. Legs coarsely and deeply punctured. Length .70-.88 inch; 18-22 mm.

The first three joints of all the tarsi are spongy pubescent beneath.

The females are usually less punctured than the males and without the network of pubescence above. This, however, is not constant, as a female in my cabinet has the network as in the male but less pronounced.

The only specimens I have seen of this species were collected at San Luis Potosi in Mexico. I have no knowledge of its having been collected within our limits except that the specimens in Dr. LeConte's cabinet labeled *albopictum* were said to be *variolure* by Mr. James Thomson when he examined them during a visit in 1876. These latter specimens are not now before me but I am inclined to think the identification erroneous and that they are the *Ulkei* above described.

The species described as having reticulated lines of pubescence are *variolure* Thoms., *albopictum* Wht., *infamixæ* Thoms., *mortuale* Thoms. and *sinistrum* Thoms. The first of these is already amply compared with the preceding species. Of *albopictum* Thomson writes (*Physis*, i, p. 80) that it is the female which is reticulate with white and not the male. *M. infamixæ* has the elytra subconfluently alveolate punctate at base. *M. mortuale* has the pubescence yellow and the dorsum of the elytra smooth, and the tarsi nigro-pilose beneath. *M. sinistrum* has the dorsum smooth and the pubescence otherwise arranged than in the other species.

**M. crassum** Lec.—Form short, robust, black, feebly shining, surface clothed with an extremely fine, black, velvety pubescence. Front sparsely punctate. Scape of antennæ smooth, joints 3-5 distinctly annulate at base. Thorax wider than long, slightly narrower at apex, sides with a short acute spine behind the middle, disc moderately convex, a few punctures sparsely scattered, coarser and deeper near the base and on the deflexed sides. Elytra rather broadly oval, scarcely narrower posteriorly, humeri broadly rounded, sides abruptly deflexed, surface sparsely and rather finely punctate at basal half, and vaguely wrinkled, the deflexed portion more distinctly punctate. Mesosternum not sulcate. Body beneath sparsely finely punctate, the coxæ conspicuously brown pubescent. Femora smooth. Length .74-.90 inch; 18.5-22.5 mm.

The first three joints of the tarsi are spongy pubescent beneath, the first joint of the hind tarsus sulcate.

This species is the most robust form in our fauna.

Collected in southwestern Texas.

**MONILEMA** Say

- M. annulatum** Say, Journ. Acad. 1824, p. 404; Lec. Journ. Acad. 1852, ii, p. 167; Lac. Gen. Atl. pl. 97, fig. 2.  
**M. appressum** Lec. loc. cit. p. 168; Col. Kans. 1859, p. 21, pl. 2, fig. 17.  
**M. gigas** Lec., New Species, 1873, p. 230.  
**M. semipunctatum** Lec., Journ. Acad. 1852, ii, p. 167.  
**M. laevigatum** Bland, Proc. Ent. Soc. Phil. i, p. 267.  
**M. armatum** Lec., Proc. Acad. 1853, p. 234; Arcana Naturæ, p. 128, pl. 13, fig. 2.  
**M. obtusum** Lec., New Species, 1873, p. 230.  
**M. spoliatum** Horn, supra.  
**M. forte** Lec., New Species, 1873, p. 230.  
**M. subrugosum** Bland, loc. cit. p. 268.  
**M. Ulkei** Horn, supra.  
**M. variolare** Thoms., Physis. i, p. 77.  
**M. crassum** Lec., Proc. Acad. 1853, p. 234.

**MONOHAMMUS** Serv.

In separating the species of this genus by means of the presence or absence of sutural prolongation of the elytra care should be taken that the male alone is relied upon, the females being variable. In well developed males of *titillator* alone, do we find a true sutural spine. In *maculosus* there is never a spine but the sutural angle is always prolonged slightly, while in *scutellatus* the elytra are always obtuse at tip in both sexes. The well known *confusor* has the apices obtuse, the sutural angle often rounded. In *marmorator* the apices of the elytra are obliquely prolonged and acute.

In all the species the male antennæ are quite roughly punctured and without pubescence, the female antennæ very much smoother and clothed with a fine cinereous pubescence on the basal half of each joint from the third except in *confusor*, in which the whole of each joint is pubescent.

The character made use of by Dr. LeConte for the separation of *oregonensis* and *scutellatus*—the denuded medial stripe of the scutellum in the first—is evanescent.

From the foregoing remarks it will be inferred that the number of specific names in our lists is greater than the number of true species.

From the evidences of my series the species may be separated in the following manner :

**A.**—Tips of elytra rounded, the sutural angle acute or spiniform, more especially in the male.

General surface color brownish, the elytra irregularly mottled with patches of brown and gray or white pubescence.....**titillator.**

General surface color piceous or black, more or less bronzed, elytral ornamentation as above, the surface sculpture coarser and deeper.

**maculosus.**

- B.**—Tips of elytra rounded, the sutural angle not prolonged, usually very obtuse. Surface color black, distinctly bronzed, the elytra with very little or no patches of white and brown pubescence; antennæ annulate in the female.

**scutellatus.**

Surface color brown, elytra sparsely mottled with small patches of gray and brown pubescence; antennæ of female uniformly pubescent.

**confusus.**

- C.**—Tips of elytra obliquely prolonged and acute. Elytra brownish, surface feebly punctured, clothed with ochreous, white and brownish patches intermixed ..... **marmorator.**

**M. titillator** Fab.

The sculpture of the thorax is variable, either very sparsely punctate or densely and closely punctate. Well developed males have the suture prolonged in a distinct spine, sometimes, however, the angle is merely acute. In the female the angle is usually acute, although sometimes nearly as obtuse as in *scutellatus*. The antennæ of the male are often very long, equalling four times the length of the body; in the female the antennæ are at most one and a half times the length of the body. Length .50–1.25 inch; 13–32 mm.

The species described as *minor* Lec., is merely a small form, it is the *carolinensis* Oliv.

Occurs from Canada to Washington Territory and south to Florida.

**M. maculosus** Hald.

In mature specimens the surface color is quite black and slightly bronzed. The elytra are more coarsely and deeply punctured than in *titillator*. The sutural angles of the elytra are acute but never spiniform, and in the female very often rounded. The male antennæ are rarely more than twice the length of the body and in the female very little longer than the body. Length .66–1.06 inch; 16.5–27 mm.

Specimens less mature resemble the darker varieties of *titillator*, while those more denuded might be mistaken for *scutellatus*. Specimens occur with the scutellum uniformly white or with a median denuded line.

Occurs from Montana to Washington Terr. and California, southward through Colorado to Arizona.

**M. scutellatus** Say.

Color quite black with a slight surface bronzing, the elytra either entirely nude or with small scattered patches of whitish pubescence, rarely with a slight dusting of brownish pubescence. Scutellum conspicuously white with often a partial or complete denuded median-line. The sutural angle in both sexes is obtuse or even rounded. The sculpture of the elytra is variable, the males have coarser punctuation which

extends to the tips of the elytra. The females often have the elytra less punctured posteriorly, although these two forms of sculpture are not constant in either sex. The male antennæ are twice as long as the body, the female one and a quarter times. Length .64–1.24 inch; 16–31 mm.

With this species I have united *oregonensis* Lec. the characters separating them being evanescent.

Occurs from Maine westward to Oregon and northward to the Hudson's Bay region.

**M. confusor** Kby.

General surface color brownish, uniformly clothed with a fine gray pubescence with small patches of brown and white sparsely placed. Apices of elytra in both sexes rounded, the sutural angle obtuse. The elytral sculpture is feebler than in the preceding species, and the punctures become rapidly finer toward the apex. The male antennæ are often more than twice, in the female very little longer than the body, the surface not pubescent in the male, uniformly gray pubescent in the female; 1.10–1.24 inch; 28–31 mm.

There seems to be less variation in the length of the specimens of this species than in those which precede.

Occurs in Canada, New England and Middle States.

**M. marmorator** Kirby.

General color dark brown, the surface moderately shining, the elytra clothed with patches of ochreous, yellowish white and brown pubescence. Apices of elytra obliquely prolonged and acute in both sexes. Surface of elytra feebly sculptured, the punctures slightly rough at base and becoming rapidly finer near the apex. Antennæ of female one and a quarter times the length of the body, distinctly annulate from the third joint. Length 1.00 inch; 25 mm.

This species appears to be extremely rare, and I have not been able to obtain more than two specimens, both females.

There is no doubt in my mind that the species described by Kirby is the same as that known by Randall's more recent name *marmoratus*, and the Kirby name being the older should be restored.

Occurs in Maine and Michigan.

**MONOHAMMUS** Serv.

**M. titillator** Fab. Syst. Ent. p. 172; Oliv. Ent. iv, 67, p. 85, pl. 15, fig. 109; Lec. Journ. Acad. ii, 2, p. 148.

*carolinensis* Oliv. Enc. Meth. vii, p. 643; Ent. loc. cit. pl. 12, fig. 88.

*dentator* Fab. Ent. Syst. i, 2, p. 278; Beauv. Ins. p. 244, pl. 36, fig. 5.

*minor* Lec. New Species, 1873, p. 231.

- M. maculosus** Hald. Trans. Am. Phil. Soc. x, p. 51.  
*mutator* Lec. Agass. Lake Super. p. 235.  
*marmoratus*† Lec. Journ. Acad. 1852, ii, p. 148.  
*clamator* Lec. loc. cit. p. 149.
- M. scutellatus** Say, Long's Exped. ii, 1824, p. 289; Lec. loc. cit. 148.  
*resutor* Kby. Faun. Bor. Am. iv, p. 167.  
*oregonensis* Lec. New Species, 1873, 231.
- M. confusor** Kby. Faun. Bor. Am. iv, p. 168; Lec. Journ. Acad. 1852, ii, p. 148.
- M. marmorator** Kby. Faun. Bor. Am. iv, p. 169.  
*marmoratus* Rand. Bost. Journ. ii, p. 42.  
*fautor* Lec. Journ. Acad. 1852, ii, p. 149.  
*acutus* Lacord. Gen. Col. ix, p. 316 note.

### GOES Lec.

This species of this genus are but few in number and may be separated in the following manner:

- Surface color of body brownish; antennæ of male at most one and a quarter times the length of the body.....2.
- Surface color of body black, shining; antennæ of male twice as long as the body, of the female as long as in the preceding males.....3.
- 2.—Elytra with conspicuous denuded fascia one-third from apex.....3.  
 Elytra without conspicuous denuded fascia.....4.
- 3.—Pubescence of surface white.....**tigrina.**  
 Pubescence ochreous or luteous, the basal region of the elytra darker, less pubescent.....**pulchra.**  
 Pubescence marmorate, whitish and ochreous, the apical region darker ochreous.....**debilis.**
- 4.—Pubescence luteous or pale brown, inconspicuously mottled with paler spots.  
**tesselata.**  
 Pubescence cinereous or almost white, uniform, sometimes with a faint trace of darker fascia.....**pulverulenta.**
- 5.—Elytra coarsely punctured, pubescence whitish, a small conspicuous black spot on each elytron one-third from apex.....**oculata.**

### Bibliography.

- G. tigrina** De Geer, Ins. v, 113, pl. 14, fig. 6; Lec. Journ. Acad. ii, p. 150.  
*tomentosus* Ziegler, Proc. Acad. ii, p. 47; Hald. Journ. Am. Phil. Soc. x, p. 51.
- G. pulchra** Hald. loc. cit. p. 52; Lec. loc. cit. p. 150.
- G. debilis** Lec. loc. cit. p. 150.
- G. tesselata** Hald. loc. cit. p. 51; Lec. loc. cit. p. 150.
- G. pulverulenta** Hald. loc. cit. p. 51; Lec. loc. cit. p. 150.
- G. oculata** Lec. Proc. Acad. 1862, p. 40.

### DORCASHEMA Hald.

This genus contains but three species as far as known separable in the following manner:

Thorax truly cylindrical, longer than wide; general surface color less the pubescence, brown.

Thorax transversely wrinkled, the punctuation indistinct; elytra densely cinereo-pubescent with small rounded denuded spots more abundant at the sides and a larger denuded spot behind the middle..... **Wildii**.

Thorax not wrinkled, punctuation distinct; pubescence of elytra rather sparse, marmorate with ochreous spots, a denuded interrupted band behind the middle..... **alternatum**.

Thorax slightly tubularly narrowed behind the middle, nearly as wide as long; color black. Disc of thorax finely rugose..... **nigrum**.

### Bibliography.

**D. Wildii** Uhler, Proc. Acad. vii, p. 217.

**D. alternatum** Say, Journ. Acad. iii. p. 405; Hald. Trans. Am. Phil. Soc. x, p. 54; Lec. Journ. Acad. 2, ii, p. 147.

**D. nigrum** Say, Journ. Acad. v, p. 272; Hald. loc. cit.; Lec. loc. cit.

The first two species live on Mulberry, the third on Hickory.

### LYPSIMENA Lec.

**L. californica** n. sp.—Brown, feebly shining, moderately elongate, cylindrical, slightly depressed. Thorax wider than long, moderately convex, sparsely coarsely punctate, sparsely cinereo-pubescent. Elytra wider at base than the thorax, punctuation coarse and moderately close near the base, much more distant near the apex, surface sparsely cinereo-pubescent forming an indistinct design of longitudinal interrupted and somewhat angulated lines. Body beneath coarsely sparsely punctate, moderately densely cinereo-pubescent. Length .36 inch; 9 mm.

One male specimen, the antennæ one-third longer than the body. It resembles *fuscata*, but differs in the form and punctuation of the thorax, that of *fuscata* being square, densely and coarsely punctured.

One male, San Diego, California.

### ONCIDERES Serv.

The species known to inhabit our fauna may be separated in the following manner:

Elytra with elevated tubercles, at last near the base; thorax with distinct lateral spine.

Thorax with a transverse, glabrous, elevated space; surface densely brownish pubescent, elytra with denuded spots, tuberculiform at base, flat posteriorly; .75 inch; 19 mm..... **pustulata** Lec.

Thorax with three callosities in a transverse row; elytra with gray pubescence, a broad ante-median band paler, and numerous spots of brownish yellow arranged in four irregular rows; .68 inch; 17 mm..... **putator** Thoms.

Elytra simply punctate, without tubercles; thorax without discal callosities.

Thorax with distinct lateral spine.

Clothed with grayish pubescence, the basal fifth and apical third of the elytra darker, the elytra with numerous ochreous spots as in *putator*; .60 inch; 15 mm..... **texana** n. sp.

Thorax without lateral spine or tubercle.

Clothed with pubescence variable in color from cinereous to ochreous, the median paler elytral band not very distinct, the spots indistinct; .56-.66 inch; 14-16.5 mm.....**cingulata** Say.

**O. pustulata** Lec. Proc. Acad. 1854, p. 82.

The only specimen I have ever seen is the type in cab. LeConte and not now before me. It is evidently closely allied to *albo-marginata* Thoms.

Occurs at Laredo, Texas.

**O. putator** Thoms. Physis. ii, p. 81.

The specimens before me are all smaller than the measurements given by Thomson but the description otherwise corresponds so closely that there can be very little doubt of their identity.

Occurs in Arizona, also in Mexico.

**O. texana** n. sp.—Moderately elongate and convex, brownish, moderately densely clothed with pale gray pubescence, less dense at basal fifth and apical third of elytra. Thorax wider than long, distinctly narrowed behind the small acute lateral tubercle, surface densely finely punctate with a few conspicuous coarse punctures sparsely placed, without denuded dorsal callosities. Elytra punctate, the punctures very coarse and close at base, sparser and finer toward the apex, surface cinereo-pubescent, with reddish yellow spots of denser pubescence arranged in four irregular series. Body beneath densely cinereo-pubescent. Legs sparsely pubescent. Length .60 inch; 15 mm.

This species might readily be mistaken for *cingulata*, but the very distinct lateral spine of the thorax and the more evident darker elytral spots will readily distinguish it. There are no distinct thoracic callosities, but the median line may be abraded. From Mr. Bates' description this species is also allied to *scitula* (Biologia, v, p. 126), but this has dorsal callosities and the thorax not narrowed behind the lateral spine.

Two specimens, Texas.

**O. cingulata** Say, Journ. Acad. v, p. 272; Lec. Journ. Acad. 2, ii, p. 165.

Variable in the color of its pubescence, and never with the median band of the elytra as distinct as in the two preceding species. The thorax has no dorsal callosities, and the lateral spine is entirely wanting or reduced to a very faint tubercle. In form the thorax may be truly cylindrical (in some females) or quite as much narrowed at base as in *putator* or *texana*.

Occurs from the Middle States to Texas.



**EUPOGONIUS** Lec.

Four species are known to inhabit our territory.

- Lateral spine of thorax acute, well marked ..... 2.  
 Lateral spine of thorax small, obtuse..... 3.  
 2.—Elytra pale castaneous, the punctuation not strong, almost obliterated near the apex, the pubescence cinereous or yellowish forming reticulations more or less transverse..... **tomentosus.**  
 Elytra piceous, the punctuation coarse gradually finer but not obliterated at tip, the pubescence luteous arranged in irregular small patches.. **vestitus.**  
 3.—Elytra nearly black, the punctuation rather coarse, finer at apex but distinct, the pubescence cinereous, fine and very evenly disposed; thorax sparsely evenly pubescent..... **pubescens.**  
 Elytra black, coarsely punctured even to the apex, pubescence black and inconspicuous; thorax with a lateral broad line of yellowish pubescence.  
**subarmatus.**

In addition to the recumbent pubescence mentioned in the above table the entire body, antennæ and legs have short erect hair. *E. subarmatus* has great resemblance in aspect to our species of *Amphionycha*.

**Bibliography.**

- E. tomentosus** Hald. Trans. Am. Phil. Soc. x, p. 50; Lec. Journ. Acad. 2, ii, p. 159.  
**E. vestitus** Say, Journ. Acad. v, p. 273; Hald. loc. cit.; Lec. loc. cit.  
*pauper* Lec. loc. cit.  
**E. pubescens** Lec. New Species, 1873, p. 236.  
**E. subarmatus** Lec. Col. Kansas, p. 92; Proc. Acad. 1861, p. 354, note.

**DYSPHAGA** Lec.

**D. bicolor** n. sp.—Pale reddish yellow, elytra, antennæ and tarsi piceous. Head coarsely and rather closely punctate. Thorax as wide as long, sides slightly arcuate, disc moderately coarsely punctate, the punctures indistinct, shallow. Scutellum pale. Elytra a little wider at base than the thorax, extending to the middle of the abdomen, dehiscent, gradually narrower to the apex which is very obtuse, disc of each indistinctly bicostate the surface punctate-scabrous, but smoother near the base. Length .30 inch; 7.5 mm.

In the specimen before me the antennæ are about one and a third times the length of the entire body and the last ventral segment deeply incised, the incisure fimbriate with short hairs. The specimens with the last ventral segment so found, or as Dr. LeConte expresses it "triangularly excavated," were considered by him to be females, and probably correctly, although the specimens of all the species known to me do not exceed five, three in the cabinet of LeConte and two in mine, and give but little ground for the expression of a positive opinion.

One specimen from Texas given me by Mr. F. G. Schaupp.

The species at present known are three, and may be thus separated :

Body in great part piceous or black.

Thorax vaguely coarsely punctate.....**tenuipes.**

Thorax smooth.....**laevis.**

Reddish yellow, antennæ, elytra and tarsi black.....**bicolor.**

**D. tenuipes** Hald. Proc. Acad. iii, p. 126; Hald. Proc. Am. Philos. Soc. iv, p. 374; Lec. Journ. Acad. 1852, ii, p. 143.

*ventralis* ♀ Hald. Proc. Am. Philos. Soc. iv, p. 374.

**D. laevis** Lec. New Species, 1873, p. 240.

**D. bicolor** n. sp. supra.

The species of this genus are all extremely rare, those taken in Pennsylvania have been reared from the terminal twigs of hickory which fall from the trees during the storms of winter, they probably appear in May or June.

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The information on which the following remarks are based was received too late to enable me to insert it in its proper place near the beginning of the paper :

### **PLAGITHMYSUS** Mots.

This name has been used in the Classification in place of *Neoclytus*. The scope originally accepted for the latter genus by Dr. LeConte in the Classification of 1873 included *Plagithmysus* as defined by Motschulsky, the latter name being the older was therefore used.

It is, however, the opinion of Dr. Sharp and others that *Plagithmysus* is worthy of being retained separate from *Neoclytus*, and he has, in fact, re-described the former under the name *Clytarlus* (Trans. Ent. Soc. Lond. 1878, p. 137), indicating in all ten species from the Sandwich Islands (Trans. Royal Dublin Soc. 1885, p. 261) one of which (*C. Blackburni* Shp.) seems to be the same as *P. pulverulentus* Motsch. It is probable that Motschulsky's specimen, obtained from Eschscholtz, came from the islands and not from California. There is, however, one specimen in Mr. Sallé's cabinet which came from California. The name *Neoclytus* should remain for our species, and from present appearances *Plagithmysus pulverulentus* should be dropped from our lists as an accidental introduction.

*Rhopalopachys morosus* Chev. = *Neoclytus irroratus* Lec.